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Before the

COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
AVIATION SUBCOMMITTEE
U.S. HOUSE OF REPRESENTATIVES

The Honorable John L. Mica, Chairman
The Honorable Jerry F. Costello, Ranking Member

Concerning

Unmanned Aerial Vehicles in the National Airspace System

March 29, 2006

Good morning, my name is Andy Cebula, Executive Vice President, Government Affairs for the Aircraft Owners and Pilots Association (AOPA), an organization representing more than 406,000 pilots and aircraft owners – more than two-thirds of all active pilots in the United States. AOPA members are general aviation pilots who use their aircraft in the same way you use your personal automobile for business, personal transportation and recreation.

Thank you Chairman Mica and Ranking Member Costello for holding this very timely hearing on Unmanned Aerial Vehicles (UAVs). There are important safety issues associated with the operation of UAVs in the United States National Airspace System (NAS) that are of great concern to the members of AOPA.

AOPA is here today requesting the Subcommittee to reinforce the Federal Aviation Administration's (FAA) responsibility for the safety of the nation's airspace. We appreciate the action taken by this Subcommittee to have language included in H.R. 4437, The Border Protection, Anti-terrorism, and Illegal Immigration Control Act of 2005 that ensures the FAA retains the authority to oversee, regulate and control the safe and efficient use of airspace in the United States.

Since the Wright Brothers ushered in the age of powered (manned) flight over 100 years ago, safety of flight has been a top priority. Pilots take seriously the responsibilities associated with operating an aircraft. As aviation evolved from a handful of aircraft in the early 20th century, to more than 230,000 aircraft sharing the skies today – the air traffic system also evolved to maintain a high degree of safety and efficiency. From no regulations in 1903 to strict regulatory oversight under the FAA, pilots fly in accordance with regulations that have served us well, as evidenced by the fact that the United States has the safest aviation system in the world.

With the exception of UAVs, there isn't an aircraft operating in today's NAS that has not complied with strict Federal Aviation Regulations (FARs) governing its certification and maintenance. And again, with the exception of UAV operators, there isn't a pilot operating today that has not undergone rigorous pilot certification training and testing.

Pilots also comply with very strict FAA general operating and flight rules as outlined in the Federal Aviation Regulations (FARs), including the FAA's important see and avoid mandate. These regulations provide the historical foundation of the FAA regulations governing the aviation system.

The problem the FAA faces is the fact that UAVs challenge this historic foundation because they operate unlike any other aircraft in the airspace system – by remote control.

This has become a significant issue recently, primarily because security agencies have now begun to operate these unregulated UAVs in the National Airspace System - before the FAA has had an opportunity to enact regulations. These UAV operations have resulted in large-scale flight restrictions while subverting progress toward regulations and proper integration of the vehicles into the airspace system – a situation that must not continue. Flight restrictions prohibit flights within a specific area of airspace defined by ground references and are in effect for stated dates and times. The use of flight restrictions for UAVs are inefficient, unfairly restrict other airspace users, and are the wrong approach to addressing the important operational and safety issues created by UAVs.

If the FAA doesn't take action to address operational issues, unregulated operations will continue to proliferate. As it stands today, other agencies will continue challenging FAA's authority for aviation safety and the control of airspace, or press the FAA for huge airspace restrictions.

The general aviation community as a whole has heightened concerns about airspace restrictions in the post 9/11 aviation world. It seems like federal agencies are quick to request (and often receive) airspace restrictions for just about any operation or reason. Adding UAV Temporary Flight restrictions (TFRs) to the already substantial list of ongoing Presidential Movement TFRs, stadium TFRs, Disney TFRs, the Washington ADIZ, and several DOD TFRs would be the worst-case scenario for the aviation system.

The concern about airspace restrictions is justified if we look at recent history. In February 2006, despite strong objections from AOPA, the FAA - at the request of Customs Border Patrol (CBP) – established a "temporary" flight restriction (TFR) along the United States-Mexico border in Arizona and New Mexico for UAV operations. In effect from 5 p.m. until 8 a.m., the 340 nm-long corridor, 15-nm wide in most places, is to prevent a CBP UAV from colliding with other civilian aircraft. But this TFR hardly seems "temporary." It's scheduled to be in effect until December 31 and will likely be renewed next year. We also understand that CBP has purchased a second UAV and the FAA is considering expanding the restriction to encompass the entire Mexican border along Texas.

From the perspective of AOPA members, for all the wrong reasons, the FAA continues to restrict airspace. First flight restrictions were used for unnecessary "security related" reasons, and now for UAV flights operating with no regulation. It is important that agencies understand airspace restrictions do not work and subvert the long-term operational integration of UAVs into the aviation system. Large blocks of sterilized airspace for UAV operations is the worst possible outcome for everyone.

AOPA objects to the existing TFR and certainly does not want to see it expanded. Members are experiencing problems with the current TFR. Here are a few quotes AOPA members in Arizona and New Mexico shared with us about the expansive restrictions:

- "This is an area of high terrain. Airplanes must fly quite high to be in contact with Prescott radio and Hermosillo to report crossing the border. It would be easy to "bust" the TFR."
- Living in NM, this is another restricted airspace adding to numerous and extended airspace restrictions that are already in place
- "I fly monthly to Mexico performing volunteer mercy flights. I use the airspace along the TFR, it will hinder our volunteer efforts…"
- "There are mountain ranges between the Phoenix area and Bisbee, Arizona. To safely navigate the route at night presents a less than desirable ceiling on the route."

AOPA believes that the use of 'temporary' large-scale flight restrictions for yearlong UAV operations is not appropriate and the FAA needs to fully explore the alternatives available to allow CBP (or any other agency for that matter) to secure our borders without impacting the aviation community. In preparation for the hearing, AOPA surveyed its members on the issue of UAV operations. The overwhelming majority rejected the notion of flight restrictions, preferring that the FAA certify UAVs for operations in the nation's airspace.

Pilots have safety concerns that must be addressed by the FAA before UAV operations should be considered. Some of these are technical and some regulatory including:

- The inability of UAVs to see and avoid manned aircraft;
- The inability of UAVs to immediately respond to ATC instructions;
- The absence of testing and demonstrations that UAVs can operate safely in the same airspace as manned aircraft; and
- The need to certify UAVs to same level of safety as manned aircraft.

Because of the lack of regulations and standards, the FAA should not even consider allowing the general operation of UAVs in the NAS until all of the safety and operational issues are resolved. It is necessary and proper that the FAA first develop UAV policies, minimum qualifications and standards for UAV operations.

FAA standards are critical because of the fact that UAVs encompass such a broad spectrum of vehicles. The sizes range from wingspans of several feet to more than 200 feet with weights of 5 pounds to 20,000 pounds. For example the Boeing Condor weighs 20,000 pounds, carries 12,000 pounds of fuel and cruises at a speed of 200 knots. Compare that to the commonly flown Cessna 172, which weighs 2300 pounds and cruises at a speed of 120 knots. In fact, the first thing that FAA must do is to provide a definition of what constitutes a UAV.

To be clear the reference to UAVs is not the "model" aircraft community. The popular pastime of flying small-scale model aircraft for recreation is a different category of use and should be separated from the other UAV categories. Guidance on their operations is provided through an Advisory Circular (AC) that defines model aircraft operations and recommended practices. However, this AC is woefully out of date and must be updated.

There are essentially three categories of UAV applications; Department of Defense, Department of Homeland Security/law enforcement, and commercial uses. The FAA has in place for DOD a policy governing UAV operations that does not involve temporary flight restrictions. Instead, DOD uses existing Special Use Airspace (SUA) and other mitigations such as chase planes, and ground spotters for its UAV operations. Other than flight restrictions, the FAA has not implemented any policies for regulating non-DOD UAV uses.

AOPA has been involved in this issue since 1991, when the FAA tasked an Aviation Rulemaking Advisory Committee (ARAC) with developing UAV guidance. While the FAA had a goal of publishing an NPRM in 1992, this never occurred.

Fast-forward to 2004, when because of growing concerns, AOPA asked FAA to address the UAV issue by creating a working group under the auspicious of the RTCA industry-government advisory group. In fact AOPA's Senior Director of Advanced Technology co-chairs this committee. The group brings together the manned and unmanned aircraft community for the purposes of developing standards for the safe introduction of UAVs into the airspace system.

Our recent experience with a sheriff's department in North Carolina underscores the importance of immediate action because of the confusion that exists over the operation of UAVs. Gaston County announced it would be using a UAV for law enforcement, up to altitudes of 1,000 feet, unaware of the potential impact this would have on the airspace system. It took AOPA contact with officials at the FAA who eventually intervened to prevent this potentially hazardous situation from occurring.

Another example was featured in the November 28, 2005, edition of the Washington Post spotlighting a start-up company called Aero View International, who is using UAV technology for agricultural purposes. The article provided detailed pricing and sent potential customers to their Web site (www.aeroviewinternational.com) for more information. Without regulations, how would such a company comply with today's complex rules and best practices for the operation of aircraft in the NAS? Even though they indicate that the UAV flies below 500 feet, one of the nation's 18,000 landing facilities may be nearby and the UAV may be a safety hazard, unbeknownst to them. The FAA must take the lead in ensuring that commercial UAV operations are safe for all airspace users.

In conclusion, the FAA has jurisdiction and should assert its authority for the safety and operating efficiencies of the nation's airspace. That authority must be exercised expeditiously to prevent the implantation of UAV TFRs at the request of other agencies. Instead, unmanned aircraft and their operation should be certified to the same level of safety as piloted aircraft. Their operation should not have a negative impact on general aviation and should not require specially designated airspace for their operation.

AOPA's fear is if the FAA does not assert its authority, we could be back here in front of you next year because of a tragic accident between a UAV and a manned aircraft. We don't want that to happen. That's why the FAA must accelerate its process of regulating UAV operations, making UAVs a part of the system instead of allowing them to continue to operate outside of the regulations.

AOPA appreciates the opportunity to testify on this important safety issue and looks forward to working with the members of the Subcommittee as UAV regulations are developed.